Chevron Phillips Chemical Company LP

—Certified Mail—
7006 3450 0001 7184 1070

John Hellstrom
EHS Manager
Sweeny Complex

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Old Ocean, TX 77463

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Sweeny, TX 77480

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hellsje@cpchem.com

www.cpchem.com

October 19, 2011

U.S. Environmental Protection Agency
Region VI, Permit Contact (6AEP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

Re: Clemens Terminal NPDES Permit Amendment
Permit No. TX0007587

Dear Sir or Madam:

Chevron Phillips Chemical Company hereby submits the following amendment application to the Consolidated Permits Program for the discharge of wastewater from its Clemens Terminal located in Brazoria County, Texas. The enclosed application consists of Application Forms 1 – General Information and 2C – Wastewater Discharge Information, as well as supporting documentation and figures.

Due the severity of the ongoing drought, the flows in the San Bernard River have decreased to the point where we are no longer able to discharge from the Clemens Terminal in compliance with the conditions of the NPDES permit. As detailed in the attached application, we are requesting the addition of a new outfall to the permit that will allow the terminal to discharge its brine to the Brazos River.

We would appreciate your consideration in processing this application as promptly as possible. At this point, we are not able to discharge to the San Bernard at all. Some storage capacity at the facility is still available, but it is limited. We have planned maintenance activities in the next few months which will require that we be able to discharge excess brine. We therefore request that this amendment be processed as quickly as possible. If there is anything we can do to help expedite this application, please let me know.

Chevron Phillips looks forward to working through the permitting process with the USEPA. If you have any questions or need additional information, please contact me at (979) 491-5550.

Sincerely,

John E. Hellstrom

John Hellstrom
EHS Manager

Attachment

RPS

13345 Stagg Trail Road, Ashland, VA 23005
Tel and Fax: (804) 798-3341
Internet: www.rpsgroup.com/energy

U.S. Environmental Protection Agency

National Pollutant Discharge Elimination System

Permit Amendment Application

Prepared For:

Chevron Phillips Chemical Company
Clemens Terminal
Brazoria, Texas
NPDES Permit No. TX0007587

October 2011

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NPDES Wastewater Permit Amendment Application

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Attachment E	Signatory Authorization Letters\
Attachment F	TPDES Permit No. WQ0000721000 and Fact Sheet and Executive Director’s Preliminary Decision

Form 1 – General Information

Please print or type in the unshaded areas only
(fill–in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F TX 0 0 0 7 5 8 7 — F/A: D

LABEL ITEMS

I. EPA I.D. NUMBER
III. FACILITY NAME
V. FACILITY MAILING ADDRESS
VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill–in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill–in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold–faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		X
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	X		
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	X		
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: CPC Clemens Terminal

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Wayne McDowell Plant Manager	979 491 5520

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
3 P O B o x 1000	4 S w e e n y	TX	77480

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
5 2611 CR 314	Brazoria	6 B r a z o r i a	TX	77422	

EPA Form 3510-1 (8-90)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
2869 (specify) Industrial Organic Chemicals	5171 (specify) Petroleum Bulk Station and Terminal
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: Chevron Phillips Chemical Company

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL; M = PUBLIC (other than federal or state); S = STATE; O = OTHER (specify); P = PRIVATE
P (specify)

D. PHONE (area code & no.): A 979 491 5500

E. STREET OR P.O. BOX: PO Box 1000

F. CITY OR TOWN: Sweeny

G. STATE: TX

H. ZIP CODE: 77480

IX. INDIAN LAND
Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): 9 N TX0007587	**D. PSD** (Air Emissions from Proposed Sources): 9 P
B. UIC (Underground Injection of Fluids): 9 U See Att A	**E. OTHER** (specify): 9 UHS-005 (specify) Texas Railroad Commission
C. RCRA (Hazardous Wastes): 9 R TXD987996543	**E. OTHER** (specify): 9 BL-0044-C (specify) Texas Air Account No.

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements. See Attachment B

XII. NATURE OF BUSINESS (provide a brief description)

The Chevron Phillips Chemical Company, LP's Clemens Terminal is a salt dome storage facility. This facility consists of underground storage caverns washed out of a salt dome and used for storage of light petroleum hydrocarbons. Brine is used to displace the hydrocarbons stored below ground. Brine storage ponds are above ground. Primary operations at this terminal consist of underground storage of hydrocarbon materials, handling, drying, and pipeline transfer. The terminal includes underground storage caverns, pipelines, transfer equipment, and process equipment.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Wayne McDowell, Plant Manager		10/20/11

COMMENTS FOR OFFICIAL USE ONLY

Form 2C – Wastewater Discharge Information

Please print or type in the unshaded areas only.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*
TX0007587

Form Approved.
OMB No. 2040-0086.
Approval expires 8-31-98.

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER *(list)*	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER *(name)*
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	28	59	01	95	34	03	San Bernard River
002	28	59	04	95	34	07	San Bernard River
003	28	59	11	95	34	06	San Bernard River
004	28	56	30	95	22	50	Brazos River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. *(list)*	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION *(list)*	b. AVERAGE FLOW *(include units)*	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001 & 004	Brine production	1.26 MGD	CT-7 4.87 million gals	1-U	
			CT-8 4.87 million gals	1-U	
			CT-9 44.1 million gals	1-U	
			CT-10 44.1 million gals	1-U	
			CT-11 0.336 million gals	1-U	
			CT-12 26.4 million gals	1-U	
002	Stormwater*	Variable	None	XX	
003	Stormwater*	Variable	None	XX	
	*Permitted under TPDES Multi-Sector General Permit for Industrial Activity				

OFFICIAL USE ONLY *(effluent guidelines sub-categories)*

Revised 01/07/2011

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES *(complete the following table)* ☒ NO *(go to Section III)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(s) CONTRIBUTING FLOW *(list)*	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK *(specify average)*	b. MONTHS PER YEAR *(specify average)*	a. FLOW RATE *(in mgd)*		b. TOTAL VOLUME *(specify with units)*		c. DURATION *(in days)*
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES *(complete Item III-B)* ☒ NO *(to to Section IV)*

B. Are the limitations in the applicable effluent guideline expressed in terms of production *(or other measure of operation)*?

☐ YES *(complete Item III-C)* ☒ NO *(go to Section IV)*

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS *(list outfall numbers)*
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES *(complete the following table)* ☒ NO *(go to Item IV-B)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharges)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*
TX0007587

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding — Complete one set of tables for each outfall — Annotate the outfall number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
See Parts V-A, B., & C of this form for effluent analytical data.			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES *(list all such pollutants below)* ☒ NO *(go to Item VI-B)*

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ YES *(identify the test(s) and describe their purposes below)* ☐ NO *(go to Section VIII)*

Toxicity testing is regularly performed on the Outfall 001 discharge in accordance with the requirements of the NPDES permit.

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ YES *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ NO *(go to Section IX)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code & no.)*	D. POLLUTANTS ANALYZED *(list)*
Test America	6310 Rothway Street Houston, TX 77040	713-690-4444	All

Analytical data is derived from samples collected in May, 2010 and is the same as that submitted with the 2010 renewal application. There have been no changes at the facility which would affect the quality of the discharge.

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE *(type or print)*	B. PHONE NO. *(area code & no.)*
Wayne McDowell, Plant Manager	979-491-5520
C. SIGNATURE	D. DATE SIGNED
	10/20/11

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: TX0007587

OUTFALL NO.: 001

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand *(BOD)*	<2						1	mg/L				
b. Chemical Oxygen Demand *(COD)*	N/A											
c. Total Organic Carbon *(TOC)*	15		7.5				19	mg/L				
d. Total Suspended Solids *(TSS)*	84						1	mg/L				
e. Ammonia *(as N)*	<02						1	mg/L				
f. Flow	VALUE 2.72		VALUE 2.26		VALUE		19	MGD		VALUE		
g. Temperature *(winter)*	VALUE N/A		VALUE N/A		VALUE			°C		VALUE		
h. Temperature *(summer)*	VALUE N/A		VALUE N/A		VALUE			°C		VALUE		
i. pH	MINIMUM 6.3	MAXIMUM 8.8	MINIMUM 6.3	MAXIMUM 7.9			19	STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	X		<60						1	mg/L				
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		<30						1	mg/L				
f. Nitrate—Nitrite *(as N)*		X												

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)		X	<1						1	mg/L				
h. Oil and Grease		X	<8.5		<8				19	mg/L				
i. Phosphorus (as P), Total (7723-14-0)		X	<0.050						1	mg/L				
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X		2,800						1	mg/L				
l. Sulfide (as S)		X	<0.010						1	mg/L				
m. Sulfite (as SO_3) (14265-45-3)		X	<2						1	mg/L				
n. Surfactants	X		<0.10						1	mg/L				
o. Aluminum, Total (7429-90-5)		X	<5						1	mg/L				
p. Barium, Total (7440-39-3)	X		1.5						1	mg/L				
q. Boron, Total (7440-42-8)		X	<02						1	mg/L				
r. Cobalt, Total (7440-48-4)		X	<0.10						1	mg/L				
s. Iron, Total (7439-89-6)	X		<4						1	mg/L				
t. Magnesium, Total (7439-95-4)	X		110						1	mg/L				
u. Molybdenum, Total (7439-98-7)		X	<0.10						1	mg/L				
v. Manganese, Total (7439-96-5)	X		0.058						1	mg/L				
w. Tin, Total (7440-31-5)		X	<0.1						1	mg/L				
x. Titanium, Total (7440-32-6)		X	<0.1						1	mg/L				

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
TX0007587	001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			<0.5						1	mg/L				
2M. Arsenic, Total (7440-38-2)	X			<0.1						1	mg/L				
3M. Beryllium, Total, 7440-41-7)	X			<0.05						1	mg/L				
4M. Cadmium, Total (7440-43-9)	X			<0.05						1	mg/L				
5M. Chromium, Total (7440-47-3)	X			<0.10						1	mg/L				
6M. Copper, Total (7440-50-8)	X			<0.10						1	mg/L				
7M. Lead, Total (7439-92-1)	X			<0.005						1	mg/L				
8M. Mercury, Total (7439-97-6)	X			<0.0002						1	mg/L				
9M. Nickel, Total (7440-02-0)	X			<0.10						1	mg/L				
10M. Selenium, Total (7782-49-2)	X			<0.04						1	mg/L				
11M. Silver, Total (7440-22-4)	X			<0.02						1	mg/L				
12M. Thallium, Total (7440-28-0)	X			<0.3						1	mg/L				
13M. Zinc, Total (7440-66-6)	X			<0.3						1	mg/L				
14M. Cyanide, Total (57-12-5)	X			<0.01						1	mg/L				
15M. Phenols, Total	X			0.005						1	mg/L				
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X			<50						1	ug/L				
2V. Acrylonitrile (107-13-1)	X			<20						1	ug/L				
3V. Benzene (71-43-2)	X			<5						1	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X			<10						1	ug/L				
5V. Bromoform (75-25-2)	X			<5						1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X			<5						1	ug/L				
7V. Chlorobenzene (108-90-7)	X			<5						1	ug/L				
8V. Chlorodibromomethane (124-48-1)	X			<5						1	ug/L				
9V. Chloroethane (75-00-3)	X			<10						1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X			<20						1	ug/L				
11V. Chloroform (67-66-3)	X			<5						1	ug/L				
12V. Dichlorobromomethane (75-27-4)	X			<5						1	ug/L				
13V. Dichlorodifluoromethane (75-71-8)	X			<5						1	ug/L				
14V. 1,1-Dichloroethane (75-34-3)	X			<5						1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X			<5						1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X			<5						1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X			<5						1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X			<5						1	ug/L				
19V. Ethylbenzene (100-41-4)	X			<5						1	ug/L				
20V. Methyl Bromide (74-83-9)	X			<5						1	ug/L				
21V. Methyl Chloride (74-87-3)	X			<5						1	ug/L				

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	X			<10						1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<5						1	ug/L				
24V. Tetrachloroethylene (127-18-4)	X			<5						1	ug/L				
25V. Toluene (108-88-3)	X			<5						1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<5						1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X			<5						1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X			<5						1	ug/L				
29V. Trichloroethylene (79-01-6)	X			<5						1	ug/L				
30V. Trichlorofluoromethane (75-69-4)	X			<5						1	ug/L				
31V. Vinyl Chloride (75-01-4)	X			<5						1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<10						1	ug/L				
2A. 2,4-Dichlorophenol (120-83-2)	X			<10						1	ug/L				
3A. 2,4-Dimethylphenol (105-67-9)	X			<10						1	ug/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<50						1	ug/L				
5A. 2,4-Dinitrophenol (51-28-5)	X			<25						1	ug/L				
6A. 2-Nitrophenol (88-75-5)	X			<10						1	ug/L				
7A. 4-Nitrophenol (100-02-7)	X			<50						1	ug/L				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10						1	ug/L				
9A. Pentachlorophenol (87-86-5)	X			<50						1	ug/L				
10A. Phenol (108-95-2)	X			<10						1	ug/L				
11A. 2,4,6-Trichlorophenol (88-06-2)	X			<10						1	ug/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10						1	ug/L				
2B. Acenaphtylene (208-96-8)	X			<10						1	ug/L				
3B. Anthracene (120-12-7)	X			<10						1	ug/L				
4B. Benzidine (92-87-5)	X			<20						1	ug/L				
5B. Benzo *(a)* Anthracene (56-55-3)	X			<10						1	ug/L				
6B. Benzo *(a)* Pyrene (50-32-8)	X			<10						1	ug/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			<10						1	ug/L				
8B. Benzo *(ghi)* Perylene (191-24-2)	X			<10						1	ug/L				
9B. Benzo *(k)* Fluoranthene (207-08-9)	X			<10						1	ug/L				
10B. Bis *(2-Chloro-ethoxy)* Methane (111-91-1)	X			<10						1	ug/L				
11B. Bis *(2-Chloro-ethyl)* Ether (111-44-4)	X			<10						1	ug/L				
12B. Bis *(2-Chloroiso-propyl)* Ether (102-60-1)	X			<10						1	ug/L				
13B. Bis *(2-Ethyl-hexyl)* Phthalate (117-81-7)	X			<40						1	ug/L				
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)	X			<10						1	ug/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10						1	ug/L				
16B. 2-Chloro-naphthalene (91-58-7)	X			<10						1	ug/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X			<10						1	ug/L				
18B. Chrysene (218-01-9)	X			<10						1	ug/L				
19B. Dibenzo *(a,h)* Anthracene (53-70-3)	X			<10						1	ug/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X			<10						1	ug/L				
21B. 1,3-Dichloro-benzene (541-73-1)	X			<10						1	ug/L				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	2. MARK 'X' b. BELIEVED PRESENT	2. MARK 'X' c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1,4-Dichlorobenzene (106-46-7)	X			<10						1	ug/L				
23B. 3,3'-Dichlorobenzidine (91-94-1)	X			<20						1	ug/L				
24B. Diethyl Phthalate (84-66-2)	X			<10						1	ug/L				
25B. Dimethyl Phthalate (131-11-3)	X			<10						1	ug/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10						1	ug/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X			<10						1	ug/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X			<10						1	ug/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10						1	ug/L				
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)	X			<10						1	ug/L				
31B. Fluoranthene (206-44-0)	X			<10						1	ug/L				
32B. Fluorene (86-73-7)	X			<10						1	ug/L				
33B. Hexachlorobenzene (118-74-1)	X			<10						1	ug/L				
34B. Hexachlorobutadiene (87-68-3)	X			<10						1	ug/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X			<10						1	ug/L				
36B. Hexachloroethane (67-72-1)	X			<10						1	ug/L				
37B. Indeno *(1,2,3-cd)* Pyrene (193-39-5)	X			<10						1	ug/L				
38B. Isophorone (78-59-1)	X			<10						1	ug/L				
39B. Naphthalene (91-20-3)	X			<10						1	ug/L				
40B. Nitrobenzene (98-95-3)	X			<10						1	ug/L				
41B. N-Nitrosodimethylamine (62-75-9)	X			<10						1	ug/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<10						1	ug/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	2. MARK 'X' b. BELIEVED PRESENT	2. MARK 'X' c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)	X			<10						1	ug/L				
44B. Phenanthrene (85-01-8)	X			<10						1	ug/L				
45B. Pyrene (129-00-0)	X			<10						1	ug/L				
46B. 1,2,4 - Trichlorobenzene (120-82-1)	X			<10						1	ug/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

Attachment A

Existing Environmental Permits – Texas Railroad Commission

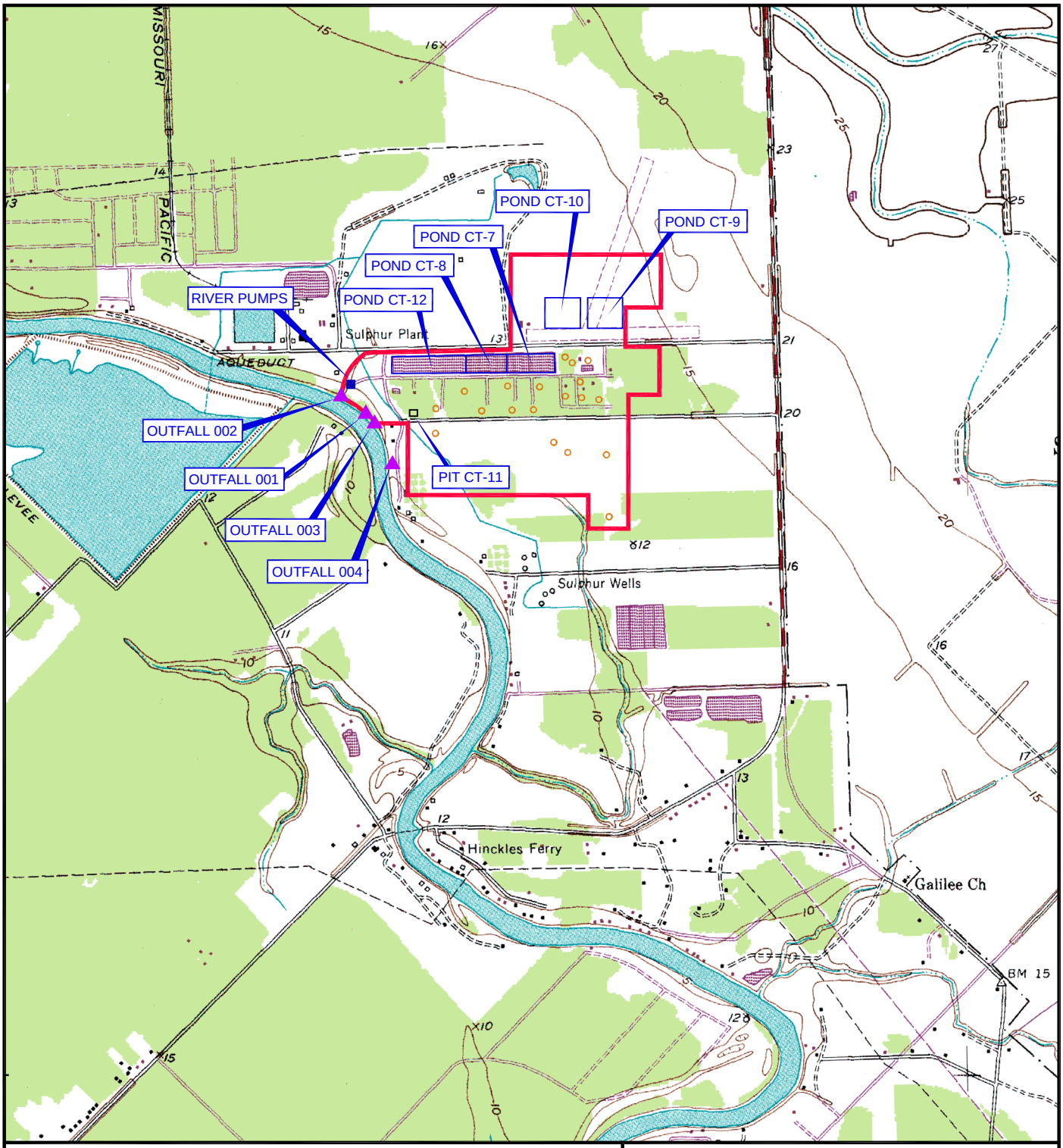
Attachment A
Clemens Terminal Cavern Permits

Permits from the Railroad Commission of Texas					
Type	**Date**	**Permit No.**	**Description**		
Underground Storage Facility	May-87	TXS000062565	Permit to Create, Operate & Maintain an Underground Hydrogcarbon Storage Facility		
Pit Operation (H111)	Mar-06	P011253	Permit to Maintain & Use a Brine Pit (CT-12)		
Pit Operation (H111)	Oct-87	P008438	Permit to Maintain & Use a Brine Pit (CT-11)		
Pit Operation (H111)	Oct-87	P008439A	Permit to Maintain & Use a Brine Pit (CT-9)		
Pit Operation (H111)	Oct-87	P008439B	Permit to Maintain & Use a Brine Pit (CT-10)		
Pit Operation (H111)	Jan-88	P008440A	Permit to Maintain & Use a Brine Pit (CT-7)		
Pit Operation (H111)	Jan-88	P008440B	Permit to Maintain & Use a Brine Pit (CT-8)		
			Cavern Well Number	**Type of Hydrocarbon**	**Primary Hydrocarbon**
Cavern Operating Permit	Sep-74	000002417	Well No. 17	Liquified Petroleum Gas	Not Applicable
Cavern Operating Permit	Sep-74	000002418	Well No. 18	Gas	Ethylene
Cavern Operating Permit	Jan-77	000063885	Well No. 19	Gas	Hydrogen
Cavern Operating Permit	Mar-82	000048321	Well No. 20	Gas	Natural Gas
Cavern Operating Permit	May-87	TSX000062565	Well No. 21	Liquified Petroleum Gas	Not Applicable
Cavern Operating Permit	Jan-94	000002404	Well No. 1	Liquified Petorluem Gas	Normal Butane
Cavern Operating Permit	Jan-94	000063882	Well No. 2	Gas	Ethylene
Cavern Operating Permit	Jan-94	000002405	Well No. 3	Liquified Petroleum Gas	Utility/spare well
Cavern Operating Permit	Jan-94	000002406	Well No. 4	Gas	Ethylene
Cavern Operating Permit	Jan-94	000002407	Well No. 5	Liquified Petroleum Gas	Propylene
Cavern Operating Permit	Jan-94	000002408	Well No. 6	Liquified Petroleum Gas	Natural Gas Liquids
Cavern Operating Permit	Jan-94	000002409	Well No. 7	Liquified Petroleum Gas	Iso-butane
Cavern Operating Permit	Jan-94	000002410	Well No. 8	Liquified Petroleum Gas	Butane-Butylene Mix
Cavern Operating Permit	Jan-94	000002411	Well No. 10	Liquified Petroleum Gas	Ethane-Propane Mix
Cavern Operating Permit	Jan-94	000002412	Well No. 11A	Liquified Petroleum Gas	Isopentane
Cavern Operating Permit	Jan-94	000002413	Well No. 12	Gas	Ethylene
Cavern Operating Permit	Jan-94	000002414	Well No. 13	Liquified Petroleum Gas	Propylene
Cavern Operating Permit	Jan-94	000002415	Well No. 14A	Liquified Petroleum Gas	Propane
Cavern Operating Permit	Jan-94	000002416	Well No. 16	Gas	Ethylene

Note: Cavern permits under Provision s of Special Order No. 3-32,483.

Attachment B

Topographic Maps



Map Source: USGS 7.5 Min. Quad Sheet CEDAR LANE NE, TX., 1952, Photorevised 1972.

LEGEND

- CAVERN
- OUTFALL LOCATION

0 2000

SCALE IN FEET

QUADRANGLE LOCATION

CHEVRON PHILLIPS CHEMICAL COMPANY LP

PROJ. NO.: ChevPhil	DATE: 10/17/11	FILE: ChevPhil-A40

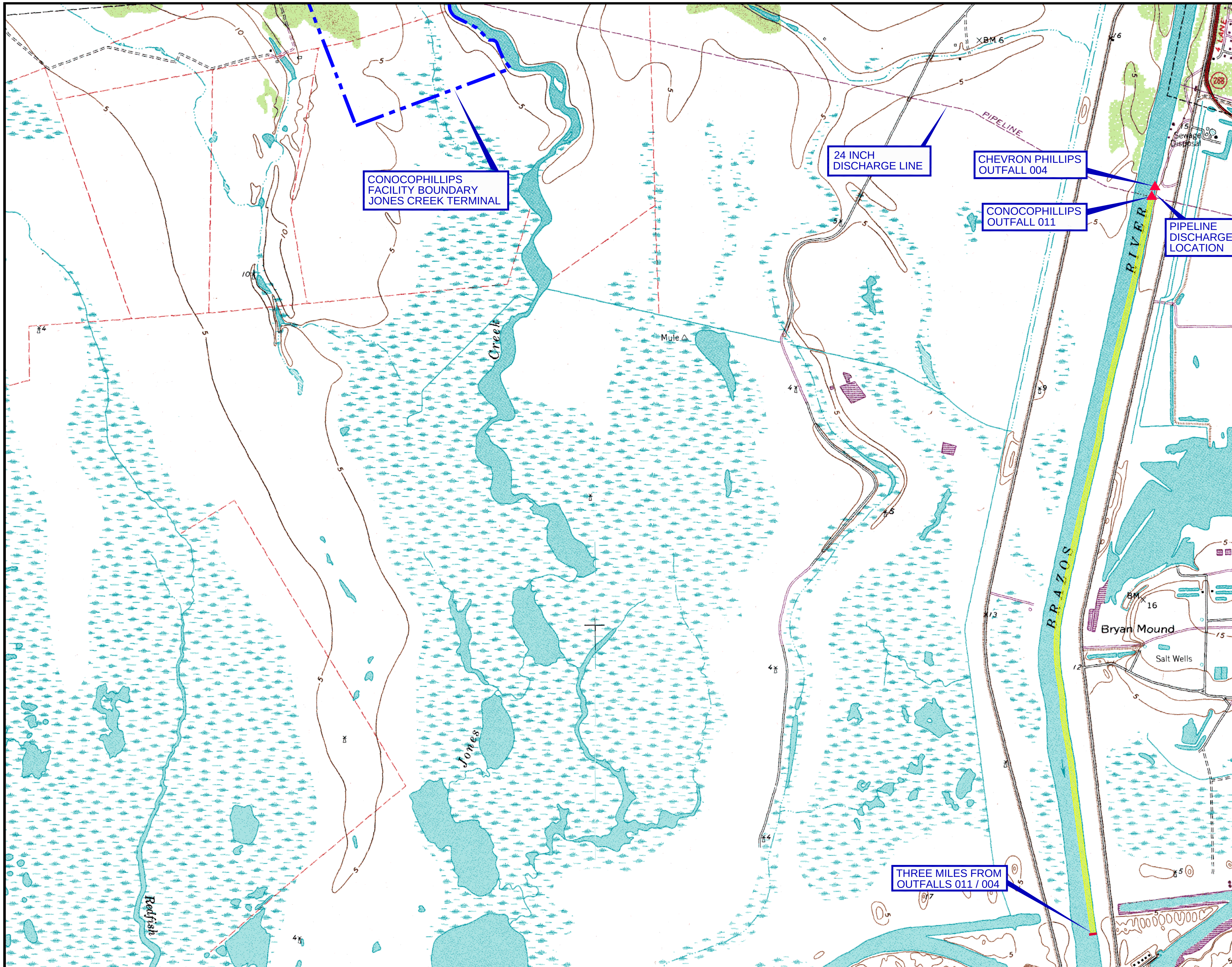
ATTACHMENT B

SITE MAP

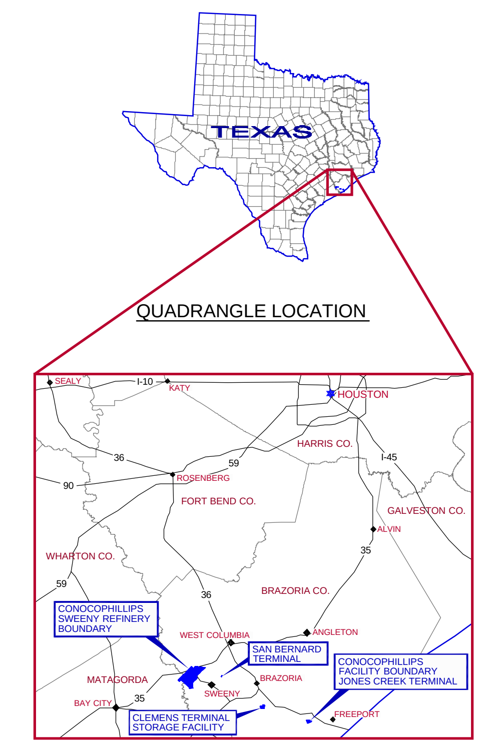
CLEMENS TERMINAL STORAGE FACILITY

RPS
Cielo Center
1250 S. Capital of Texas Highway
Building 3, Suite 200
Austin, Texas 78746
TBPE No. 1298

Map Source: USGS 7.5 Min. Quad Sheet JONES CREEK, TX., 1974.



0 2000
SCALE IN FEET



QUADRANGLE LOCATION

LOCATION MAP INSET

LEGEND

PROPERTY BOUNDARY

DISCHARGE ROUTE

OUTFALL LOCATION

CHEVRON PHILLIPS
CHEMICAL COMPANY LP

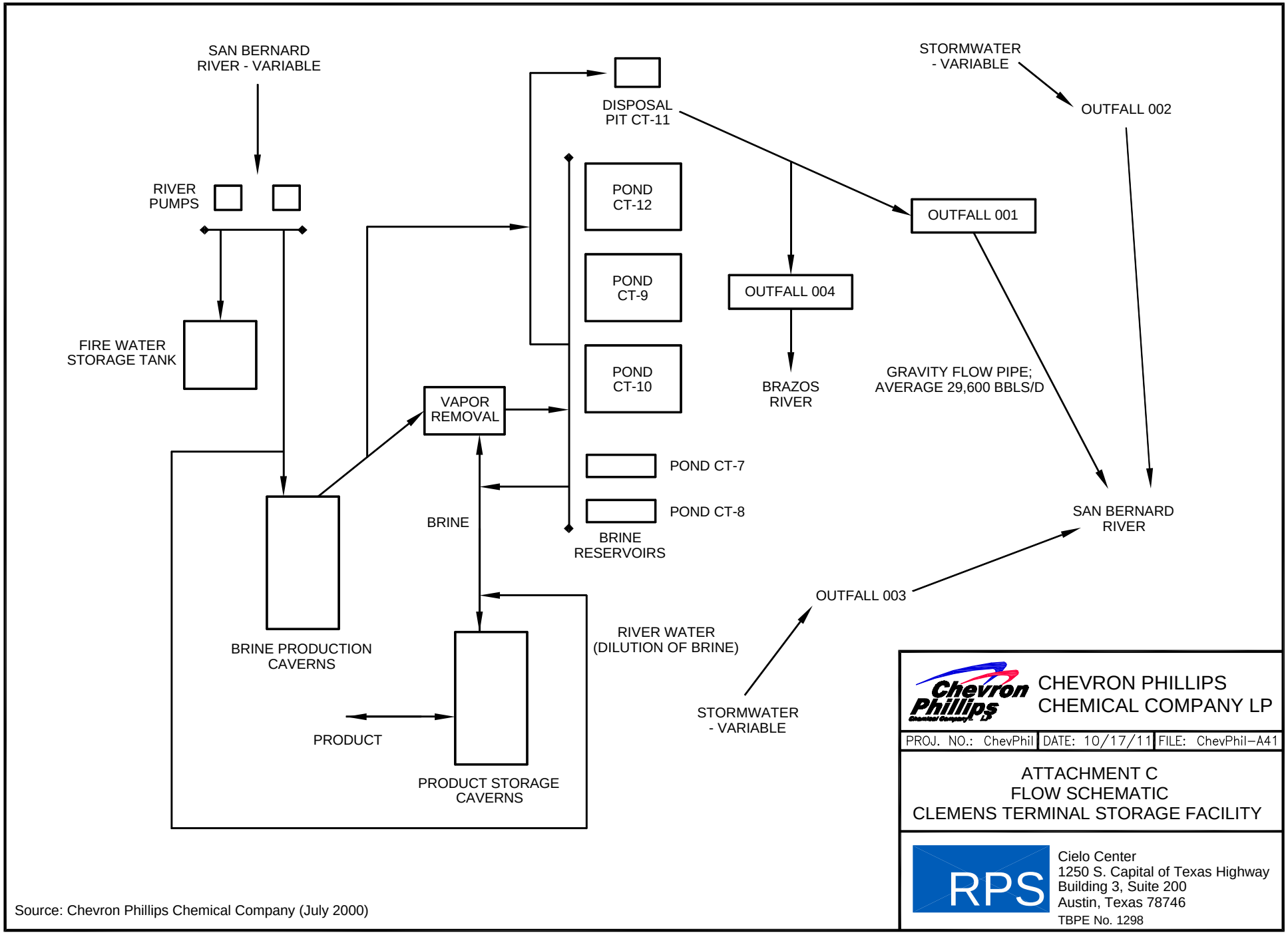
PROJ. NO.: ChevPhil	DATE: 10/17/11	FILE: ChevPhil–B58

ATTACHMENT B
USGS MAP
CLEMENS TERMINAL STORAGE FACILITY

RPS
Cielo Center
1250 S. Capital of Texas Highway
Building 3, Suite 200
Austin, Texas 78746
TBPE No. 1298

Attachment C

Flow Schematic Diagram



Source: Chevron Phillips Chemical Company (July 2000)

CHEVRON PHILLIPS
CHEMICAL COMPANY LP

PROJ. NO.: ChevPhil	DATE: 10/17/11	FILE: ChevPhil-A41

ATTACHMENT C
FLOW SCHEMATIC
CLEMENS TERMINAL STORAGE FACILITY

RPS
Cielo Center
1250 S. Capital of Texas Highway
Building 3, Suite 200
Austin, Texas 78746
TBPE No. 1298

Attachment D

Requested Permit Amendments

Attachment D
Requested Permit Amendments

Chevron Phillips requests that the NPDES permit for the Clemens Terminal be amended to authorize new Outfall 004 for the discharge of brine production water to an existing underground pipeline which discharges to the Brazos River in Segment 1201 of the Brazos River Basin.

Under the existing NPDES permit, the Clemens Terminal is authorized to discharge brine to the San Bernard River via Outfall 001. In order to preclude potential toxicity, the NPDES permit requires that Chevron Phillips monitor the upstream flow in the San Bernard and restrict the Outfall 001 discharge rate to 5% of less of the upstream San Bernard River flow.

As a result of the ongoing drought, the flow in the San Bernard River has been reduced to the point where there is essentially no freshwater flow over the salt intrusion dam located upstream of the Clemens Terminal. The facility has not been able to discharge for several months and there is no way to predict how long it will be before the Clemens Terminal can resume discharging to the San Bernard River on a consistent basis. The facility has lined impoundments with a total storage capacity of almost 125 million gallons, but these impoundments are filling up and an alternative means of discharging the excess brine is needed before the storage capacity is exceeded.

The ConocoPhillips Company operates a petroleum refinery in Sweeny, Texas. The Sweeny Complex pumps its treated effluent through a 26-mile, 24-inch pipeline that discharges to the tidally-influenced zone of the Brazos River approximately 1.25 miles south of the State Highway 36 river crossing. The route of the existing effluent pipeline from the Sweeny Complex to the Brazos River passes through the Clemens Terminal property.

Chevron Phillips is proposing to tie into the pipeline at a point where it passes through the terminal and use the pipeline to carry its excess brine with the refinery effluent to the Brazos River. Sampling will be performed at the tie-in point on the pipeline, which would be designated in the amended NPDES permit as Outfall 004. The ConocoPhillips Company, which owns the pipeline, has agreed to allow Chevron Phillips to utilize the pipeline and will cooperate with Chevron Phillips in the construction of the pipeline connection and its operation.

A copy of the TPDES permit and most recent Fact Sheet and Executive Director's Preliminary Decision for the ConocoPhillips Sweeny Complex is provided with this application as Attachment F. As noted in that permit, the discharge to the Brazos River (Outfall 011 under the ConocoPhillips TPDES permit) is to the tidal zone of the river, which is classified as a wide tidal river. The mixing zone for Outfall 011 established in accordance with the Texas Surface Water Quality Standards (TSWQS) is a 200-foot radius from the point of discharge. The critical TSWQS criteria for this outfall are identical to those for Chevron Phillips' Outfall 001 at the San Bernard River (critical dilution for application of the biomonitoring criteria and the chronic criteria for aquatic life protection is 8% effluent).

Since the receiving water at the Brazos River outfall location is similar in nature to that of the San Bernard River outfall location, we believe that the permit conditions for new Outfall 004 should be similar to those of existing Outfall 001. To preclude potential chronic toxicity, the Clemens Terminal effluent should remain at less than 5% of the edge of the mixing zone in the Brazos River. Since the mixing condition at the edge of the mixing zone (as specified in the ConocoPhillips TPDES permit) for the Brazos River at this location is 8% effluent, this can be achieved by restricting the Clemens Terminal discharge to a flow rate that is equal to or less than the flow rate of the refinery effluent in the pipeline. Outfall 004 will be flow-restricted similar to the way Outfall 001 is in the

current permit, except that the Outfall 004 discharge rate will be limited by the daily flow from the ConocoPhillips refinery. When planning to discharge to the pipeline, the Clemens Terminal will obtain the Outfall 011 flow rate from ConocoPhillips and restrict its brine discharge rate accordingly.

Attachment E

Signatory Authorization Letters

C. W. McDowell
Plant Manager
Sweeny Complex

21689 State Highway 35
Old Ocean, TX 77463

P.O. Box 1000
Sweeny, TX 77480

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mcdowcw@cpchem.com

www.cpchem.com

—Certified Mail—
7008 2810 0000 8797 3307

March 24, 2010

EPA Region 6
Water Enforcement Branch (6EN-WT)
1445 Ross Ave., Suite 1200
Dallas, TX 75202-2733

Re: Delegation of Signatory Authority
Chevron Phillips Chemical Company LP,
Sweeny Complex and Clemens Terminal
Brazoria County, TX
NPDES Permit No. TX0007587

Dear Environmental Protection Agency Representative:

The purpose of this letter is to identify duly authorized responsible officials for purposes of reporting under federal and state environmental regulations (Code of Federal Regulations Title 40 Protection of Environment and Texas Administrative Code Title 30 Environmental Quality). The enclosed letter from Mr. R.L. Roberts, Senior Vice President-Manufacturing of Chevron Phillips Chemical Company LP (Chevron Phillips), authorizes the following positions at Chevron Phillips' Sweeny Complex and Clemens Terminal to act as a Responsible Official or as a duly authorized representative for purposes of making all necessary representations, certifications and submissions in connection with environmental permits and in satisfying environmental laws and regulations:

- Plant Manager
- EHS Manger, and
- Environmental Supervisor.

If you have any questions or need additional information, please contact Jennifer Ashcraft at 979-491-5639.

Sincerely,

C. W. McDowell
Plant Manager

CWM/JOA:dlb

Enclosure

1003-13

bcc: Env. File 1.23
Jennifer Ashcraft
John Hellstrom
Wayne McDowell
David Speaker
Carl Holmgren
Murali Ramamoorthy

☑ Existing File ☐ New File
File #: E.1.23 Due Date: NA
Assigned to: Ashcraft
Activity/Subject Title: "Responsible Official" Designation Letter
cc: Ashcraft Ramamoorthy SCAN
McDowell Speaker

Received by
EHS Team
FEB 04 2010
CPChem Sweeny Complex

R. L. Roberts
Senior Vice President
Manufacturing

10001 Six Pines Drive
Room 6028
The Woodlands, TX 77380

PO Box 4910
The Woodlands, TX 77387

Telephone: 832-813-4820
Fax: 832-813-4380
roberts@cpchem.com

January 26, 2010

To Whom It May Concern:

Acting in the capacity of Senior Vice President, Manufacturing for Chevron Phillips Chemical Company LP, I hereby authorize the Plant Manager, Sweeny Complex and Clemens Terminal to act as a Responsible Official or as a duly authorized representative for purposes of making all necessary certifications and submissions in connection with environmental permits. The Sweeny Complex and Clemens Terminal Plant Manager is also authorized (within the limits of the other applicable delegations of expenditure authority) to take all other actions and to make any required representations in connection with satisfying environmental laws and regulations.

I also hereby authorize the EHS Manager and the Environmental Superintendent of the Sweeny Complex and Clemens Terminal (within the limits of applicable law and within the limits of the other applicable delegations of company expenditure authority to take any and all actions and to make any required representations in connection with satisfying environmental laws and regulations.

Sincerely,

R L Roberts

R. L. Roberts
Sr. Vice President-Manufacturing

Attachment F

TPDES Permit No. WQ0000721000 and Fact Sheet and Executive Director's Preliminary Decision

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0000721000 (TX00007536) to discharge to water in the state.

Issuing Office:	Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	ConocoPhillips Company P.O. Box 866 Sweeny, Texas 77480-0866
Prepared By:	Monica Vallin-Baez Wastewater Permitting Section (MC-148) Water Quality Division (512) 239-5784
Date:	February 8, 2008
Permit Action:	Amendment; TPDES Permit No. WQ0000721000

I. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The proposed permit will be issued to retain the current expiration date of July 1, 2012.

II. APPLICANT ACTIVITY

The applicant currently operates the Sweeny Refinery and Petrochemical Complex and the San Bernard Terminal.

III. DISCHARGE LOCATION

As described in the application, the plant site is located at the refinery and petrochemical complex approximately 3.5 miles northwest of the City of Sweeny and southwest of the intersection of State Highway 35 and Farm-to-Market Road 524; the San Bernard Terminal is located on an extension of Avenue A approximately 1.5 miles northeast of the City of Sweeny, Brazoria County, Texas. Discharge is from Outfalls 002, 006, and 010 are to Little Linnville Bayou; thence to Linnville Bayou; thence to Caney Creek Tidal in Segment No. 1304 of the Brazos-Colorado Coastal Basin; from Outfall 005 directly to the San Bernard River Tidal in Segment No. 1301 of the Brazos-Colorado Coastal Basin; from Outfall 011 directly to the Brazos River Tidal in Segment No. 1201 in the Brazos River Basin; from Outfalls 012, 003, and 009 to Armstrong ditch, thence to Cedar Lake Creek, thence to Old Ocean Swamp, thence to Cedar Lake Creek, thence to Cedar Lakes in Segment No. 2442 of the Bays and Estuaries.

IV. RECEIVING STREAM USES

The unclassified receiving waters have no significant aquatic life use for the Little Linnville Bayou, Linnville Bayou, Old Ocean Swamp, and Cedar Lake Creek. The designated uses for Segments 1201, 1301, and 1304 are contact recreation and high aquatic life use; and the uses for Segment 2442 are contact recreation, high aquatic life use, and oyster waters.

V. STREAM STANDARDS

The general criteria and numerical criteria which make up the stream standards are provided in the Texas Administrative Code (TAC), 30 TAC Sections 307.1 - §307.10, effective April 30, 1997.

VI. DISCHARGE DESCRIPTION

The permittee is applying for a major amendment without renewal to authorize the addition of a new Outfall 012 to discharge storm water on an intermittent and flow variable; and removal of 24-hour testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

The Fact Sheet for the existing permit dated March 13, 2007 reported results from the Monthly Effluent Report data as shown below:

The following is a quantitative description of the discharge described in the Monthly Effluent Report data for the period November 2004 through December 2006. The "Average of Daily Avg." values presented in the following table are the average of all daily average values for the reporting period for each parameter. The "Maximum of Daily Max." values presented in the following table are the individual maximum values for the reporting period for each parameter:

A. Flow

Outfall	Frequency	Average of Daily Avg (MGD)	Maximum of DailyMax (MGD)
011	Continuous	5.23 6.56 (max. daily avg.)	7.99

B. Temperature (degrees F)

N/A

C. Effluent Characteristics

Outfall	Parameter	Average of Daily Avg	Maximum of Daily Max
002	no discharge during this period		
003	Total Organic Carbon	N/A	17.6 mg/L
	Oil & Grease	N/A	11.0 mg/L
	pH (standard units)	(6.8 minimum)	(8.94)
005	Total Organic Carbon	N/A	10.6 mg/L
	Oil & Grease	N/A	6.6 mg/L
	pH (standard units)	(7.2 minimum)	(8.2)
006	no discharge during this period		
009	Total Organic Carbon	N/A	17.8 mg/L
	Oil & Grease	N/A	9.2 mg/L
	pH (standard units)	(7.03 minimum)	(8.5)

Outfall	Parameter	Average of Daily Avg	Maximum of Daily Max
010	Total Organic Carbon	N/A	14.9 mg/L
	Oil & Grease	N/A	6.6 mg/L
	pH (standard units)	(7.0 minimum)	(8.47)
011	Biochemical Oxygen Demand (5-day)	4.02 mg/l 182.7 lbs/day	N/A 1541 lbs/day
	Ammonia nitrogen	32.5 lbs/day	607 lbs/day
	Oil & Grease	260 lbs/day	413 lbs/day
	Chemical Oxygen Demand	3669.5 lbs/day	9875 lbs/day
	Dissolved Oxygen	5.5 mg/L (minimum)	N/A
	pH (standard units)	(5.9 minimum)	(10.9)
	pH excursions		25
	Total Phenols	1.06 lbs/day	3.7 lbs/day
	Total Suspended Solids	561 lbs/day	2983 lbs/day
	Sulfides	2.37 lbs/day	6.6 lbs/day
	Cyanide (amenable)	5.76 mg/l	30.6 mg/l
	Hexavalent Chromium	0 lbs/day	0 lbs/day
	Total Chromium	0.0238 lbs/day	0.5 lbs/day
	Total Zinc	0.101 mg/L	0.985 mg/L
	Total Selenium	0.137 mg/L	0.209 mg/L

During the period of evaluation there were no exceedances of permit limitations.

VII. PROPOSED EFFLUENT LIMITATIONS

The permittee is applying for a major amendment without renewal to authorize the addition of a new Outfall 012 to discharge storm water on an intermittent and flow variable; and removal of 24-hour testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

The effluent limits for Outfalls 002, 003, 005, 006, 009, 010, and 011 will remain the same as in the existing permit with the exception of the addition of Outfall 012 and removal of the 24-hour biomanitoring for Outfall 005 as requested in the amendment application.

Final effluent limitations are established in the draft permit as follows:

Outfall No.	Parameter	Daily Average	Daily Maximum
002	Total Organic Carbon	N/A	70 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	
003	Total Organic Carbon	N/A	70 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	

Outfall No.	Parameter	Daily Average	Daily Maximum
005	Total Organic Carbon	N/A	55 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	
006	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	
009	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	
010	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	
011	Flow (MGD)	(7.4)	(12.5)
	BOD (5-day)	Report, mg/L	N/A
		2201 lbs/day	4102 lbs/day
	COD	13,006 lbs/day	25,228 lbs/day
	TSS	1791 lbs/day	2857 lbs/day
	Ammonia as N	494 lbs/day	2310.9 lbs/day
	Oil and Grease	689 lbs/day	1287 lbs/day
	Phenolic Compounds (4AAP)	14.0 lbs/day	29.0 lbs/day
	Sulfides	9.8 lbs/day	21.8 lbs/day
	Total Chromium	22.2 lbs/day	63.7 lbs/day
	Hexavalent Chromium	1.95 lbs/day	4.38 lbs/day
	Total Mercury	N/A	Report, mg/L
	Total Selenium	Report, mg/L	Report, mg/L
	Total Zinc	Report, mg/L	Report, mg/L
	Cyanide, Amenable to Chlorination	N/A	Report, mg/L
	Dissolved Oxygen	5.0 mg/L (minimum)	
	pH	Between 6 and 9 standard units.	
012	Total Organic Carbon	N/A	70 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	Between 6 and 9 standard units.	

VIII. SUMMARY OF CHANGES FROM APPLICATION

The following changes have been made from the application which make the draft permit more stringent.

The applicant has requested a major amendment without renewal. However, applicant shall complete Attachment 2 (Table 1-SW) of the Other Requirements with the analytical results for Outfall 012 and sent to the TCEQ, Wastewater Permitting Section (MC-148), within 90 days following the first discharge after permit issuance. Please see page 13 of the Other Requirements of the draft permit, Item 8.

See the next section for additional changes to the existing permit.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

The permittee requested the following changes in their amendment request which the Executive Director has recommended granting.

1. The permittee requested authorization to add a new Outfall 012 to discharge storm water. The outfall will be located on a small berm that separates Armstrong Ditch from a ditch that drains storm water run-off from the Cogen and Flare Field to the south of the Main Office Building. The berm was constructed to help prevent flooding within the Complex by preventing Armstrong Ditch from backing up into the facility. As part of its Hurricane Preparedness Plan, the permittee is proposing to stage a temporary pump along the berm to move run-off from field into Armstrong Ditch. Outfall 012 will be used intermittently to discharge storm water runoff only.

2. The permittee requested authorization to remove the 24-hour biomonitoring testing requirements at Outfall 005. Based on an Interoffice Memorandum dated November 29, 2007, from the Water Quality Standards Team, it was determine that the 24-hour biomonitoring testing for Outfall 005 is no longer required.

The following additional changes have been made to the draft permit.

1. The discharge route description for Outfalls 003 and 009 has been revised to better describe the discharge route for these outfalls.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

A. REASON FOR PERMIT ISSUANCE

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment to Permit No. WQ0000721000 to authorize the addition of Outfall 012 to discharge storm water; and to remove the 24-hour biomonitoring testing for Outfall 005. The current permit authorizes the discharge of storm water on an intermittent and flow variable basis via Outfalls 002, 003, 006, 009, and 010, which will remain the same; boiler blowdown and storm water on an intermittent and flow variable basis via Outfall 005, which will remain the same; and treated process wastewater, domestic wastewater, utility wastewater, demineralizer wastes, and storm water at a daily average flow not to exceed 7,400,000 gallons per day via Outfall 011, which will remain the same.

The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the action is consistent with the applicable CMP goals and policies.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

B. WATER QUALITY SUMMARY

The discharge route is from Outfalls 002, 006, and 010 are to Little Linnville Bayou; thence to Linnville Bayou; thence to Caney Creek Tidal in Segment No. 1304 of the Brazos-Colorado Coastal Basin; from Outfall 005 directly to the San Bernard River Tidal in Segment No. 1301 of the Brazos-Colorado Coastal Basin; from Outfall 011 directly to the Brazos River Tidal in Segment No. 1201 in the Brazos River Basin; from Outfalls 012, 003, and 009 to Armstrong ditch, thence to Cedar Lake Creek, thence to Old Ocean Swamp, thence to Cedar Lake Creek, thence to Cedar Lakes in Segment No. 2442 of the Bays and Estuaries. The unclassified receiving waters have no significant aquatic life use for the Little Linnville Bayou, Linnville Bayou, Old Ocean Swamp, and Cedar Lake Creek. The designated uses for Segments 1201, 1301, and 1304 are contact recreation and high aquatic life use; and the uses for Segment 2442 are contact recreation, high aquatic life use, and oyster waters. Effluent limitations and/or conditions established in the draft permit are in compliance with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit will be found at Section X.D. of this fact sheet.

In accordance with §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards, an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Caney Creek Tidal, the San Bernard River Tidal, the Brazos River Tidal, or Cedar Lakes, which has been identified as having high aquatic life uses. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The discharge from this permit is not expected to have an effect on any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) biological opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES; September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. Though the piping plover, *Charadrius melodus* Ord, can occur in both the segment 2442, Segment and the County, they are north of Copano Bay and not a watershed of high priority per Appendix A of the biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threaten species.

Segment No. 1201, 1301 and 1304 are not currently listed on the State's inventory of impaired and threatened waters, Texas 2002 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality, February 2005. Segment No. 2442 is currently listed for elevated bacteria levels (oyster waters). Nonsupporting areas are restricted or prohibited for the growing and harvesting of shellfish for direct marketing due to potential contamination by pathogens. The potential for contamination is due to huge numbers of waterfowl that winter in the area; there are few, if any, human sources in proximity to Cedar Lakes.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

Regulations promulgated in Title 40 of the Code of Federal Regulations require technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, and/or on best professional judgment (BPJ) in the absence of guidelines.

The proposed draft permit authorizes the discharge of treated process wastewater, domestic wastewater, utility wastewaters, demineralizer wastes and storm water via Outfall 011 at a daily average flow not to exceed 7.4 million gallons per day; the discharge of boiler blowdown, and storm water via Outfall 005 on an intermittent and flow variable basis, and the intermittent flow variable discharge of storm water runoff via Outfalls 002, 003, 006, 009, 010, and 012.

The discharge of treated process wastewater and process area storm water via Outfall 011 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 419. A new source determination was performed and the discharge is not a new source as defined at 40 CFR Section 122.2. Therefore new source performance standards (NSPS) are not required for this discharge.

The discharge of domestic wastewater, utility wastewater, and demineralizer wastes via Outfall 011; boiler blowdown and storm water via Outfall 005; and storm water via Outfalls 002, 003, 006, 009, 010, and 012 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgement.

The wastewater system at this facility consists of two separate branches known as Wastewater Treaters #1 and #2. All of the process wastewater generated at the Sweeny Refinery and associated facilities is collected within these two systems. This includes wastewater from the Cogeneration Facility (operated by Sweeny Cogeneration LP), the Coker (operated by Merey Sweeny LP), the Ethylene and NGL units (operated by ChevronPhillips) and the adjacent Coke Handling Facility (operated by KinderMorgan).

In the Wastewater Treater #1, wastewater is collected into two equalization tanks, then pumped to three parallel Corrugated Plate Interceptors (CPIs) where oil/water separation is performed. The separated oil flows into the Oil Collection Tank where it is pumped to the Slop Oil Tanks. The CPIs are covered and volatile organic compound (VOC) emissions are controlled by collection and routing to a thermal oxidizer. The water phase from the CPIs flows to a Rapid Mix Tank (RMT) where sulfuric acid is added for pH control. From the RMT, wastewater is pumped to three Induced Air Flotation units (IAFs) where air is used to induce further oil separation. From the IAFs, wastewater flows to the Bio-Equalization Sump where it is combined with other wastewater flow and contaminated storm water.

Wastewater Treater #1 also includes the Spent Caustic Treatment System which handles sulfides and carbonate spent caustic streams from the ChevronPhillips ethylene units as well as an acid neutralization spent caustic stream. The caustic streams are gathered and routed to a surge tank that provides a minimum of seven days capacity in case of a treatment system shutdown.

The caustic stream is pumped to a wet air oxidation process treatment system. The treated spent caustic stream is then pumped to the CPI Equalization Tank located at Wastewater Treater #2,

Wastewater Treater #2 waste streams are both pumped and gravity drained to the Main Lift Station, then to the CPI Equalization tank. Wastewater from the CPI Equalization Tanks is pumped to the CPI Splitter Box where flow is split between the three Wastewater Treater #2 CPIs.

Wastewater from the CPIs flow to the Wastewater Treater #2 RMT where sulfuric acid is added for pH control. The RMT drains to the Dissolved Gas Flotation (DGF) splitter which divides the flow between two DGF units. Wastewater from the DGFs goes to the DGF Effluent Collection Tank.

Wastewater from the DGF Effluent Collection Tank is combined with wastewater from the Bio-System Equalization Sump. The combined flow is then routed to the two Bio-System Equalization Tanks, and then pumped to the 1st Stage Aeration Tank, 1st Stage Clarifier, 2nd Stage Aeration Tank, then 2nd Stage Clarifier. Effluent from the clarifiers is pumped to a sump, then routed to Outfall 011 via a 24-inch pipeline.

2. CALCULATIONS

The permittee is applying for a major amendment without renewal to authorize the addition of a new Outfall 012 to discharge uncontaminated storm water onan intermittent and flow variable; and removal of 24-hour testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

The effluent limits will remain the same as in the existing permit with the exception of the addition of Outfall 012 and the removal of the 24-hour biomonitoring testing for Outfall 005 as requested in the amendment application.

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit.

See Appendix C of this fact sheet for a comparison of technology-based effluent limitations and water quality-based effluent limitations and the proposed final effluent limitations in the draft permit.

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The Texas Surface Water Quality Standards found at 30 TAC Chapter 307 state that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" is designed to insure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to insure that no source will be allowed to discharge any wastewater which: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or

numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity data bases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

2. AQUATIC LIFE CRITERIA

The permittee is applying for a major amendment without renewal to authorize the addition of Outfall 012 to discharge storm water on an intermittent and flow variable; and to remove 24-hour biomonitoring testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

The proposed Outfall 012 for the intermittent flow variable discharge of storm water is not subject to screening against water quality-based effluent limitations.

An effluent analysis was not conducted nor is required to be submitted with the application for amendment without renewal for Outfalls 002, 003, 005, 006, 009, 010, and 011, since no changes were requested for these outfalls. Therefore, no screening was performed. Upon renewal of the permit, the effluent will be screened against the appropriate water quality criteria. Title 30 Texas Adminstrative Code Chapter 307.

The following section discuss the screening and permit actions from the Fact Sheet for the existing permit dated March 13, 2007.

a. SCREENING

Analytical data reported in the application for Outfalls 011 were screened against calculated water quality-based effluent limitations for the protection of aquatic life. Water quality-based effluent limitations were calculated from marine aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). The intermittent flow variable discharges of storm water runoff via Outfalls 002, 003, 006, 009, and 010 are not subject to screening against water quality-based effluent limitations. Analytical data was not provided for Outfall 005 due to no discharge. Therefore, the permit required that analytical data must be submitted for review from the discharge after permit issuance.

Outfall 011

Acute marine criteria are applied at the edge of the zone of initial dilution (ZID) and chronic marine criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as 50 feet from the point where the discharge enters Brazos River Tidal. The aquatic life mixing zone for this discharge is defined as a radius of 200 feet from the point where the discharge enters Brazos River Tidal.

TCEQ practice is to establish minimum estimated effluent percentages at the edges of the ZID and aquatic life mixing zone for discharges that are 10 MGD or less into bays, estuaries, or wide tidal rivers that are at least 400 feet wide. These critical effluent percentages are as follows:

Acute Effluent %: 30% Chronic Effluent %: 8%

Outfall 005

Acute marine criteria are applied at the edge of the zone of initial dilution (ZID) and chronic marine criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as 20 feet upstream and 60 feet downstream from the point where the discharge enters San Bernard River Tidal. The aquatic life mixing zone for this discharge is defined as 100 feet upstream and 300 feet downstream from the point where the discharge enters San Bernard River Tidal.

TCEQ uses the mass balance equation to estimate dilution at the edges of the ZID and aquatic life mixing zone during critical conditions. The estimated dilution at the aquatic life mixing zone is calculated using the two-year maximum monthly average effluent flow of 0.42 MGD and the 7-day, 2-year (7Q2) flow of 14.14 cfs for San Bernard River Tidal. If the estimated effluent percentage is less than 8%, then 8% is used. The estimated dilution at the ZID is calculated using the two-year maximum monthly average effluent flow of 0.42 MGD and 25% of the 7Q2 flow. If the estimated effluent percentage is less than 30%, then 30% is used. The following critical effluent percentages are being used:

Acute Effluent %: 30% Chronic Effluent %: 8%

Wasteload allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration which can be discharged, when after mixing in the receiving stream, instream numerical criteria will not be exceeded. From the WLA, a long term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level for the Brazos River Tidal. From the WLA, a long term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 90th percentile confidence level for the San Vernard River Tidal. The LTA is the long term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level. The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12). Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH and Total Suspended Solids (TSS) according to the segment-specific values contained in the TCEQ guidance document, "Implementation of the Texas Commission on Environmental Quality Standards via Permitting." The values for Segment 1201are 3500 mg/l Chlorides and 10 mg/l for TSS and for Segment 1301are 2920 mg/l Chlorides and 12 mg/l for TSS. For additional details on the

calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported in the application for Outfall 011was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection.

No analytical data was available for Outfall 005 for screening against water quality-based effluent limitations. The proposed permit requires submittal of analytical data from the discharge after permit issuance.

3. AQUATIC ORGANISM TOXICITY CRITERIA (7-DAY CHRONIC)

The permittee is applying for a major amendment without renewal to authorize the addition of Outfall 012 to discharge storm water on an intermittent and flow variable; and to remove 24-hour biomonitoring testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

The proposed Outfall 012 for the intermittent flow variable discharge of storm water runoff is not subject to screening against water quality-based effluent limitations.

The following section discuss the screening and permit actions from the Fact Sheet for the existing permit dated March 13, 2007.

a. SCREENING

The existing permit includes chronic marine biomonitoring requirements at Outfall 011. There have been no apparent toxicity problems during the current permit term. Analytical data submitted with the application does not indicate violation of any numerical water quality-based effluent limitation for aquatic life protection, therefore minimum chronic biomonitoring conditions required for EPA classified major facilities are proposed in the draft permit as outlined below.

b. PERMIT ACTION

The provisions of this section apply to Outfall(s) 011.

Based on information contained in the permit application, TCEQ has determined that there may be pollutants present in the effluent(s) which may have the potential to cause toxic conditions in the receiving stream.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Chronic static renewal 7-day survival and growth test using the mysid shrimp (Mysidopsis bahia). The frequency of the testing is once per quarter.

ii) Chronic static renewal 7-day larval survival and growth test using the inland silverside (Menidia beryllina). The frequency of the testing is once per quarter.

The permittee shall conduct all toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition" (EPA-821-R-02-014), or the most recent update thereof. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 3%, 5%, 6%, 8%, and 11%. The low-flow effluent concentration (critical dilution) is defined as 8% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone which is calculated in section X.D.2.a. of this fact sheet.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24 - HOUR ACUTE)

a. SCREENING

The existing permit includes 24-hour acute marine biomonitoring language for Outfall(s) 011.

b. PERMIT ACTION

24-hour, 100% acute biomonitoring tests are proposed at Outfall(s) 011 at a frequency of once per six months for the life of the permit.

The 24-hour acute biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Acute 24-hour static toxicity test using the mysid shrimp (Mysidopsis bahia) . A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

ii) Acute 24-hour static toxicity test using the the inland silverside (Menidia beryllina). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

The permittee is applying for a major amendment without renewal to authorize the addition of Outfall 012 to discharge storm water on an intermittent and flow variable; and to remove 24-hour biomonitoring testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

An effluent analysis was not conducted nor is required to be submitted with the application for amendment without renewal for Outfalls 002, 003, 005, 006, 009, 010, and 011, since no changes were requested for these outfalls. Therefore, no screening was performed. Upon renewal of the permit, the effluent will be screened against the appropriate water quality criteria. Title 30 Texas Adminstrative Code Chapter 307.

The following section discuss the screening and permit actions from the Fact Sheet for the existing permit dated March 13, 2007.

a. SCREENING

Outfall 011

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of marine fish tissue found in Table 3 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Marine fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into bays, estuaries and wide tidal rivers. The human health mixing zone for this discharge is defined as a 400-foot radius from the point where the discharge enters the Brazos River Tidal. TCEQ practice is to establish a minimum estimated effluent percentage at the edge of the human health mixing zone for discharges that are 10 MGD or less into bays, estuaries, and wide tidal rivers that are at least 400 feet wide. This critical effluent percentage is:

Human Health Effluent %: 4%

Outfall 005

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of marine fish tissue found in Table 3 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Marine fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into narrow tidal rivers. The human health mixing zone for this discharge is identical to the aquatic life mixing zone. TCEQ uses the mass balance equation to estimate dilution at the edge of the human health mixing zone during average flow conditions. The estimated dilution at the edge of the human health mixing zone is calculated using the two-year monthly average effluent flow of 0.18 MGD and the harmonic mean flow of 58.92 cfs for San Bernard River Tidal. If the estimated effluent percentage is less than 4%, then 4% is used. The following critical effluent percentage is being used:

Human Health Effluent %: 4%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long term average calculation is used with only one long term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported in the application for Outfall 011was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection.

No analytical data was available for Outfall 005 for screening against water quality-based effluent limitations. The proposed permit requires submittal of analytical data from the discharge after permit issuance.

6. DRINKING WATER SUPPLY PROTECTION

The permittee is applying for a major amendment without renewal to authorize the addition of Outfall 012 to discharge storm water on an intermittent and flow variable; and to remove 24-hour biomonitoring testing for Outfall 005. This permit action is an amendment without renewal, therefore the expiration date of the existing permit will remain the same as the draft permit.

The following section discuss the screening and permit actions from the Fact Sheet for the existing permit dated March 13, 2007.

a. SCREENING

Water quality Segment Nos. 1201, 1301, 1304 and 2442 which receive the discharges from this facility are not designated as a public water supply. Screening reported analytical data for Outfalls 011 and 005 against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

b. PERMIT ACTION

None.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works (POTW). Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application. This notice sets a deadline for public comment.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application contact Monica Vallin-Baez at (512) 239-5784.

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. PERMIT(S)

TPDES Permit No. WQ0000721000 issued July 12, 2007.

B. APPLICATION

TPDES wastewater permit application received September 25, 2007 and additional information submitted with letter dated November 2, 2007.

C. 40 CFR CITATION(S)

40 CFR Part 419

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

Interoffice Memorandum from the Water Quality Assessment Team (Miller) to the Industrial Permits Team dated November 29, 2007.

Interoffice Memorandum from the Water Quality Assessment Team (Rudolph) to the Industrial Permits Team dated November 28, 2007.

Interoffice Memorandum from the Water Quality Assessment Team (Smith) to the Industrial Permits Team dated November 28, 2007.

Interoffice Memorandum from the Water Quality Standards Team (Burgess) to the Industrial Permits Team dated November 13, 2007.

E. MISCELLANEOUS

Quality Criteria for Water (1986), EPA 440/5-86-001, 5/1/86.

The State of Texas Water Quality Inventory, 13th Edition, Publication No. SFR-50, Texas Commission on Environmental Quality, December 1996.

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10 (21 TexReg 9765, 4/30/97), and Appendix E, effective February 27, 2002.

"Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition," EPA/600/4-90/027F.

"Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA-600-4-91-003).

"Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

"TCEQ Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits," TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

The permittee is applying for a major amendment <u>without</u> renewal to authorize the addition of Outfall 012 to discharge storm water on an intermittent and flow variable; and remove the 24-hour biomonitoring testing for Outfall 005. The following section discusses the screening and permit actions from the existing permit that was issued on July 12, 2007. (Please see the Fact Sheet dated March 13, 2007.)

Appendix A

40 CFR Part 419, Subpart C - Petrochemical Subcategory Effluent Limitations

Table A.1 CALCULATION OF THE PROCESS CONFIGURATION FOR THE BP PRODUCTS REFINERY

PROCESS (With Codes)	CAPACITY (1000 BBL/DAY)	CAPACITY RELATIVE TO THROUGHPUT	WEIGHTING FACTOR	PROCESS CONFIGURATION
Refinery Throughput:	260 (1000 BBL/DAY)			
A) Crude or Topping				
1 Atmospheric	260	1.00		
2 Desalting	131.6	0.51		
3 Vacuum Distillation	247	0.95		
Total Topping	638.6	2.46	1	2.46
B) Cracking				
6 FCC	107	0.41		
10 Hydrocracking		0.00		
11 Delayed Coking	74.1	0.29		
Hyrdotreating	313.5			
Total Cracking	494.6	0.70	6	4.18
C) Reforming & Alkylation				
8 Alkylation	0	0.00		
12 Catalytic Reforming	37.5	0.14		
Total R & A	37.5	0.14	-	-
		Total Refinery Process Configuration		6.64
		Process Factor		1.08
		Size Factor		1.13
		Multiplier (Feed stock X Process factor X Size factor)		317 1000 bbl/day

1. The Size Factor is derived from 40 CFR §419.32 (b)(1) and is based on the feedstock rate of 260 (1000 bbl/day).

2. The Weighting Factors for the process configurations are defined in 40 CFR §419.42 (b)(3).

3. The Total Refinery Configuration Factor is calculated by taking the sum of the capacity relative to throughput for each process subcategory multiplied by the corresponding weighting factor. The products of each subcategory are then added together to obtain the Total Refinery Process Configuration Factor.

4. The Total Refinery Process Configuration Factor is then used to determine the Process Factor which is derived from 40 CFR §419.32 (b)(2).

5. The Multiplier is used to calculate the daily average and daily maximum mass limits based on 40 CFR §419.32 (a) BPT. The multiplier is the product of the feedstock rate, the size factor, and the process factor.

Table A.3 Best Available Technology (BAT) Calculations 40 CFR 419.33 (c)

Parameter	Process	Daily Average (lb/1000 bbl of feedstock)	Daily Maximum (lb/1000 bbl of feedstock)	Production K-Bbl/day	Daily Average (lb/day)	Daily Maximum (lb/day)
Phenol	Crude	0.003	0.013	638.6	1.92	8.30
	Cracking	0.036	0.147	494.6	17.81	72.71
	Reforming	0.032	0.132	37.5	1.20	4.95
	Total Phenol				20.92	85.96
Total Chromium	Crude	0.004	0.011	638.6	2.55	7.02
	Cracking	0.041	0.119	494.6	20.28	58.86
	Reforming	0.037	0.107	37.5	1.39	4.01
	Total Chromium				24.22	69.89
Hexavalent Chromium	Crude	0.0003	0.0007	638.6	0.19	0.45
	Cracking	0.0034	0.0076	494.6	1.68	3.76
	Reforming	0.0031	0.0069	37.5	0.12	0.26
	Total Hexavalent Chromium				1.99	4.46

The Refinery Process Allocation Effluent limitations for phenol, total chromium, and hexavalent chromium are based on 40 CFR §419.33 (c)(1) BAT guidelines. Total Refinery Process Allocation effluent limitations are calculated by determining the sum of the subcategory process allociations. The subcategory process allocations are calculated by multiplying the subcategory 1000 bbl/day capacity in Table A.1 by its lb/1000 of feedstock allowance in the above table.

Total Refinery Process Allocation =

(Crude Process Total * Feedstock) + (Cracking Process Total * Feedstock) + (Reforming Process Total * Feedstock)

Sample Calculation for Daily Average Total Refinery Process Allocation for Phenol =

(0.003)(638.6) + (0.036)(494.6) + (0.032)(37.5) = 20.92 lb/day

* COD, Ammonia as N, and Sulfide limits are equivalent to BPT limits.

Table A.4 Stormwater Allowance for BPT 40 CFR Part 419.32 (e)

Parameter	Daily Average	Daily Maximum	Average Stormwater Runoff	Daily Average	Daily Maximum
	(lb/1000 gal)	(lb/1000 gal)	(1000 gal/day)	(lb/day)	(lb/day)
BOD_5	0.22	0.4	1500	330	600
TSS	0.18	0.28	1500	270	420
COD	1.5	3	1500	2250	4500
O & G	0.067	0.13	1500	101	195
Phenols	0.0014	0.0029	1500	2.1	4.4
Total Chromium	0.0035	0.006	1500	5.3	9.0
Hexavalent Chromium	0.00023	0.00052	1500	0.3	0.8
pH (standard units)				6.0 (min)	9.0 (max)

Table A.5 Stormwater Allowance for BAT 40 CFR Part 419.33 (f)

Parameter	Daily Average	Daily Maximum	Average Stormwater Runoff	Daily Average	Daily Maximum
	(lb/1000 gal)	(lb/1000 gal)	(1000 gal/day)	(lb/day)	(lb/day)
COD	1.5	3	1500	2250	4500
Phenols	0.0014	0.0029	1500	2.1	4.4
Total Chromium	0.0018	0.005	1500	2.7	7.5
Hexavalent Chromium	0.00023	0.00052	1500	0.3	0.8
pH (standard units)				6.0 (min)	9.0 (max)

Table A.6 Comparison of BPT and BAT Effluent Limits*

Parameter	Total Allowable Loading - BPT		Total Allowable Loading - BAT	
	Daily Average (lbs/day)	Daily Maximum (lbs/day)	Daily Average (lbs/day)	Daily Maximum (lbs/day)
BOD_5	**2392**	**4439**		
TSS	**1936**	**3054**		
COD	**14434**	**27980**		
O & G	**767**	**1432**		
Phenols	**16**	**32**	23.02	90.31
Ammonia-N	**1206**	**2618**		
Sulfide-S	**11**	**25**		
Total Chromium	34	**58**	**26.92**	77.39
Hexavalent Chromium	**2**	**5**	2.33	5.24
pH (standard units)	**6.0 (min)**	**9.0 (max)**		

*Process wastewater plus contaminated stormwater

The lowest mass limitation is used in subsequent calculations.

Table A.7 Allocations for Domestic Wastewater -BPJ-based

Flow = 0.3 MGD from application
Multiplier = (0.3 MGD)(8.345) = 2.5

Allowable Loading = Effluent Allocations X Multiplier

Parameter	Effluent Allocations (mg/L)			Allowable Loading (lbs/day)	
	Daily Average	Daily Maximum	Multiplier	Daily Average	Daily Maximum
BOD (5-day)	20	45	2.5	50	112.5
TSS	20	45	2.5	50	112.5

The following table shows the final technology-based effluent limitations for discharges subject to 40 CFR 419 and wastestreams given pollutant allocations based on BPJ. These effluent limitations were calculated by comparing the BPT limits with the BAT limits and selecting the most protective. Then, the allocations for the the Domestic Wastewater were added to the BPT and BAT comparison results. These limits are applicable to Outfall 011.

Table A.8 Final Summation of Technology-Based Effluent Limitations - 40 CFR 419*

Parameter	Total Allowable Loading - Technology-Based	
	Daily Average (lb/day)	Daily Maximum (lb/day)
BOD_5	2442	4552
TSS	1986	3166
COD	14434	27980
O & G	767	1432
Phenols	16	32
Ammonia-N	1206	2618
Sulfide-S	11	25
Total Chromium	27	58
Hexavalent Chromium	2	5
pH (standard units)	6.0 (min)	9.0 (max)

*Most Stringent from Table A.6 daily average mass limit

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

The permittee is applying for a major amendment without renewal to authorize the addition of Outfall 012 to discharge storm water on an intermittent and flow variable; and remove the 24-hour biomonitoring testing for Outfall 005. The following section discusses the screening and permit actions from the existing permit that was issued on July 12, 2007. (Please see the Fact Sheet dated March 13, 2007.)

APPENDIX B WATER QUALITY BASED EFFLUENT LIMITATIONS

TEXTOX MENU #6 - NARROW MARINE WATERBODY WITH A DEFINED FLOW

The water quality-based effluent limitations demonstrated below are calculated using:

- Table 1, 1997 Texas Surface Water Quality Standards (30 TAC 307) for Marine Aquatic Life
- Table 3, 2000 Texas Surface Water Quality Standards for Human Health
- "Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

PERMITTEE INFORMATION:

Permittee Name:	ConocoPhillips Company
TPDES Permit No:	WQ0000721000
Outfall No:	005
Prepared By:	Deborah Helstrom
Date:	March 14, 2007

DISCHARGE INFORMATION:

Immediate Receiving Waterbody:	San Bernard River Tidal
Segment No:	1301
TSS:	12
Chloride:	2920
Effluent Flow for Aquatic Life (MGD)	0.42
Critical Low Flow [7Q2] (cfs)	14.14
Chronic Effluent % for Aquatic Life:	8.00
Acute Effluent % for Aquatic Life:	30.00
Effluent Flow for Human Health (MGD):	0.18
Harmonic Mean Flow (cfs):	58.92
Human Health Effluent %:	4.00

CALCULATE TOTAL/DISSOLVED RATIO:

Estuarine Metal	Intercept (b)	Slope (m)	Partition Coefficient (Kp)	Dissolved Fraction (Cd/Ct)		Water Effects Ratio (WER)	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Cadmium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Chromium (Total)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Chromium (+3)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	4.85	-0.72	11830.130	0.88		1	Assumed
Lead	6.06	-0.85	138897.984	0.38		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	5.86	-0.74	115187.639	0.42		1	Assumed
Zinc	5.36	-0.52	62925.366	0.57		1	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Acute Standard (ug/L)	Chronic Standard (ug/L)	WLAa	WLAc	LTAa	LTAc	Daily Avg. (ug/L)	Daily Max. (ug/L)
Aldrin	1.3	N/A	4.333	N/A	2.483	N/A	3.650	7.722
Aluminum[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic[d]	149	78	496.667	975.000	284.590	750.750	418.347	885.075
Cadmium[d]	45.62	10.02	152.067	125.250	87.134	96.443	128.087	270.987
Carbaryl	613	N/A	2043.333	N/A	1170.830	N/A	1721.120	3641.281
Chlordane	0.09	0.004	0.300	0.050	0.172	0.039	0.057	0.120
Chlorpyrifos	0.011	0.0056	0.037	0.070	0.021	0.054	0.031	0.065
Chromium (+3)[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (+6)[d]	1100	50	3666.667	625.000	2101.000	481.250	707.438	1496.688
Copper[d]	16.27	4.37	61.932	62.380	35.487	48.032	52.166	110.365
Cyanide (free)	5.6	5.6	18.667	70.000	10.696	53.900	15.723	33.265
4,4'-DDT	0.13	0.0010	0.433	0.013	0.248	0.010	0.014	0.030
Dementon	N/A	0.1	N/A	1.250	N/A	0.963	1.415	2.993
Dicofol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.0019	2.367	0.024	1.356	0.018	0.027	0.057
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan (alpha)	0.034	0.0087	0.113	0.109	0.065	0.084	0.095	0.202
Endosulfan (beta)	0.034	0.0087	0.113	0.109	0.065	0.084	0.095	0.202
Endosulfan sulfate	0.034	0.0087	0.113	0.109	0.065	0.084	0.095	0.202
Endrin	0.037	0.0023	0.123	0.029	0.071	0.022	0.033	0.069
Guthion	N/A	0.01	N/A	0.125	N/A	0.096	0.141	0.299
Heptachlor	0.053	0.0036	0.177	0.045	0.101	0.035	0.051	0.108
Hexachlorocyclohexane (Lindane)	0.16	N/A	0.533	N/A	0.306	N/A	0.449	0.950
Lead[d]	140	5.6	1244.495	186.674	713.096	143.739	211.297	447.029
Malathion	N/A	0.01	N/A	0.125	N/A	0.096	0.141	0.299
Mercury	2.1	1.1	7.000	13.750	4.011	10.588	5.896	12.474
Methoxychlor	N/A	0.03	N/A	0.375	N/A	0.289	0.424	0.898
Mirex	N/A	0.001	N/A	0.013	N/A	0.010	0.014	0.030
Nickel[d]	119	13.2	396.667	165.000	227.290	127.050	186.764	395.126
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.14	9.56	50.467	119.500	28.917	92.015	42.509	89.933
Phenanthrene	7.7	4.6	25.667	57.500	14.707	44.275	21.619	45.739
Polychlorinated Biphenyls (PCBs)	10	0.03	33.333	0.375	19.100	0.289	0.424	0.898
Selenium	564	136	1880.000	1700.000	1077.240	1309.000	1583.543	3350.216
Silver, (free ion)	2.3	N/A	203.365	N/A	116.528	N/A	171.297	362.403
Toxaphene	0.21	0.0002	0.7000	0.0025	0.4011	0.0019	0.0028	0.0060
Tributlytin (TBT)	0.24	0.043	0.800	0.538	0.458	0.414	0.608	1.287
2,4,5 Trichlorophenol	259	12	863.333	150.000	494.690	115.500	169.785	359.205
Zinc[d]	98	89	573.33	1952.55	328.52	1503.47	482.93	1021.70

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	SW Fish Only (ug/L)	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
Acrylonitrile	7.3	182.500	169.725	249.496	527.845
Aldrin	0.0028	0.070	0.065	0.096	0.202
Arsenic[d]	N/A	N/A	N/A	N/A	N/A
Barium[d]	N/A	N/A	N/A	N/A	N/A
Benzene	70.8	1770.000	1646.100	2419.767	5119.371

Benzidine	0.00232	0.058	0.054	0.079	0.168
Benzo(a)anthracene	0.540	13.500	12.555	18.456	39.046
Benzo(a)pyrene	0.540	13.500	12.555	18.456	39.046
Bis(chloromethyl)ether	0.0129	0.323	0.300	0.441	0.933
Cadmium[d]	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	5.614	0.000	130.200	191.394	404.922
Chlordane	0.0213	0.533	0.495	0.728	1.540
Chlorobenzene	920	23000.000	21390.000	31443.300	66522.900
Chloroform	861	21525.000	20018.250	29426.828	62256.758
Chromium[d]	2216	55400.000	51522.000	75737.340	160233.420
Chrysene	5.413	5.000	125.550	184.559	390.461
Cresols	8744	218600.000	203298.000	298848.060	632256.780
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.007	0.175	0.163	0.239	0.506
4,4'-DDE	0.005	0.125	0.116	0.171	0.362
4,4'-DDT	0.005	0.125	0.116	0.171	0.362
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol	0.481	12.025	11.183	16.439	34.780
Dibromochloromethane	47.7	1192.500	1109.025	1630.267	3449.068
1,2-Dibromoethane	0.223	5.575	5.185	7.622	16.125
1,3-Dichloropropene (1,3-Dichloropropylene)	107	2675.000	2487.750	3656.993	7736.903
Dieldrin	0.001	0.025	0.023	0.034	0.072
p-Dichlorobenzene	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	49.3	1232.500	1146.225	1684.951	3564.760
1,1-Dichloroethylene	3.90	97.500	90.675	133.292	281.999
Dicofol	0.144	3.600	3.348	4.922	10.412
Dioxins/Furans (TCDD Equivalents)	9.33e-08	2.33e-06	2.17e-06	3.19e-06	6.75e-06
Endrin	0.893	22.325	20.762	30.521	64.571
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.00177	0.044	0.041	0.060	0.128
Heptachlor Epoxide	0.723	18.075	16.810	24.710	52.278
Hexachlorobenzene	0.0132	0.330	0.307	0.451	0.954
Hexachlorobutadiene	2.46	0.000	55.800	82.026	173.538
Hexachlorocyclohexane (alpha)	0.275	6.875	6.394	9.399	19.885
Hexachlorocyclohexane (beta)	0.964	24.100	22.413	32.947	69.704
Hexachlorocyclohexane (gamma) (Lindane)	1.34	33.500	31.155	45.798	96.892
Hexachloroethane	185	4625.000	4301.250	6322.838	13376.888
Hexachlorophene	0.036	0.900	0.837	1.230	2.603
Lead[d]	16.9	1126.713	1047.843	1540.329	3258.791
Mercury	0.0250	0.625	0.581	0.854	1.808
Methoxyclor	1.48	37.000	34.410	50.583	107.015
Methyl Ethyl Ketone	6.63e+06	1.66e+08	1.54e+08	2.27e+08	4.79e+08
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	156	3900.000	3627.000	5331.690	11279.970
N-Nitrosodiethylamine	5.12	128.000	119.040	174.989	370.214
N-Nitroso-di-*n*-Butylamine	8.98	224.500	208.785	306.914	649.321
PCB's (Polychlorinated Biphenyls)	8.85e-04	2.21e-02	2.06e-02	3.02e-02	6.40e-02
Pentachlorobenzene	4.45	111.250	103.463	152.090	321.768
Pentachlorophenol	90	2250.000	2092.500	3075.975	6507.675
Pyridine	8889	222225.000	206669.250	303803.798	642741.368
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.162	4.050	3.767	5.537	11.714
Tetrachloroethylene	215	5375.000	4998.750	7348.163	15546.113
Toxaphene	0.009	0.225	0.209	0.308	0.651
2,4,5-TP (Silvex)	33.6	840.000	781.200	1148.364	2429.532

2,4,5-Trichlorophenol	712	17800.000	16554.000	24334.380	51482.940
Trichloroethylene	408	10200.000	9486.000	13944.420	29501.460
1,1,1-Trichloroethane	8391	209775.000	195090.750	286783.403	606732.233
TTHM (Sum of Total Trihalomethanes)	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	277	6925.000	6440.250	9467.168	20029.178

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	**70%**	**85%**
Aquatic Life		
Aldrin	2.555	3.103
Aluminum	N/A	N/A
Arsenic	292.843	355.595
Cadmium	89.661	108.874
Carbaryl	1204.784	1462.952
Chlordane	0.040	0.048
Chlorpyrifos	0.022	0.026
Chromium (+3)	N/A	N/A
Chromium (+6)	495.206	601.322
Copper	36.516	44.341
Cyanide (free)	11.006	13.365
4,4'-DDT	0.010	0.012
Dementon	0.990	1.203
Dicofol	N/A	N/A
Dieldrin	0.019	0.023
Diuron	N/A	N/A
Endosulfan (alpha)	0.067	0.081
Endosulfan (beta)	0.067	0.081
Endosulfan sulfate	0.067	0.081
Endrin	0.023	0.028
Guthion	0.099	0.120
Heptachlor	0.036	0.043
Hexachlorocyclohexane (Lindane)	0.314	0.382
Lead	147.908	179.602
Malathion	0.099	0.120
Mercury	4.127	5.012
Methoxychlor	0.297	0.361
Mirex	0.010	0.012
Nickel	130.734	158.749
Parathion (ethyl)	N/A	N/A
Pentachlrophenol	29.756	36.132
Phenanthrene	15.134	18.376
Polychlorinated Biphenyls (PCBs)	0.297	0.361
Selenium	1108.480	1346.011
Silver, (free ion)	119.908	145.602
Toxaphene	0.0020	0.0024
Tributlytin (TBT)	0.426	0.517
2,4,5 Trichlorophenol	118.850	144.317
Zinc	338.048	410.486
Human Health		
Acrylonitrile	174.647	212.071
Aldrin	0.067	0.081
Arsenic	N/A	N/A
Barium	N/A	N/A

Benzene	1693.837	2056.802
Benzidine	0.056	0.067
Benzo(a)anthracene	12.919	15.687
Benzo(a)pyrene	12.919	15.687
Bis(chloromethyl)ether	0.309	0.375
Cadmium	N/A	N/A
Carbon Tetrachloride	133.976	162.685
Chlordane	0.510	0.619
Chlorobenzene	22010.310	26726.805
Chloroform	20598.779	25012.803
Chromium	53016.138	64376.739
Chrysene	129.191	156.875
Cresols	209193.642	254020.851
Cyanide (free)	N/A	N/A
4,4'-DDD	0.167	0.203
4,4'-DDE	0.120	0.145
4,4'-DDT	0.120	0.145
2,4'-D	N/A	N/A
Danitol	11.508	13.973
Dibromochloromethane	1141.187	1385.727
1,2-Dibromoethane	5.335	6.478
1,3-Dichloropropene (1,3-Dichloropropylene)	2559.895	3108.444
Dieldrin	0.024	0.029
p-Dichlorobenzene	N/A	N/A
1,2-Dichloroethane	1179.466	1432.208
1,1-Dichloroethylene	93.305	113.298
Dicofol	3.445	4.183
Dioxins/Furans (TCDD Equivalents)	2.23e-06	2.71e-06
Endrin	21.364	25.942
Fluoride	N/A	N/A
Heptachlor	0.042	0.051
Heptachlor Epoxide	17.297	21.004
Hexachlrobenzene	0.316	0.383
Hexachlorobutadiene	57.418	69.722
Hexachlorocyclohexane (alpha)	6.579	7.989
Hexachlorocyclohexane (beta)	23.063	28.005
Hexachlorocyclohexane (gamma) (Lindane)	32.059	38.928
Hexachloroethane	4425.986	5374.412
Hexachlorophene	0.861	1.046
Lead	1078.230	1309.280
Mercury	0.598	0.726
Methoxyclor	35.408	42.995
Methyl Ethyl Ketone	1.59e+08	1.93e+08
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	3732.183	4531.937
N-Nitrosodiethylamine	122.492	148.740
N-Nitroso-di-*n*-Butylamine	214.840	260.877
PCB's (Polychlorinated Biphenyls)	2.12e-02	2.57e-02
Pentachlorobenzene	106.463	129.276
Pentachlorophenol	2153.183	2614.579
Pyridine	212662.658	258233.228
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	3.876	4.706
Tetrachloroethylene	5143.714	6245.938
Toxaphene	0.215	0.261

2,4,5-TP (Silvex)	803.855	976.109
2,4,5-Trichlorophenol	17034.066	20684.223
Trichloroethylene	9761.094	11852.757
1,1,1-Trichloroethane	200748.382	243765.892
TTHM (Sum of Total Trihalomethanes)	N/A	N/A
Vinyl Chloride	6627.017	8047.092

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TEXTOX MENU #5 - BAY OR WIDE TIDAL RIVER

The water quality-based effluent limitations demonstrated below are calculated using:

- Table 1, 1997 Texas Surface Water Quality Standards (30 TAC 307) for Marine Aquatic Life
- Table 3, 2000 Texas Surface Water Quality Standards for Human Health
- "Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

PERMITTEE INFORMATION:

Permittee Name:	ConocoPhillips Company
TPDES Permit No:	WQ0000721000
Outfall No:	011
Prepared By:	Deborah Helstrom
Date:	March 14, 2007

DISCHARGE INFORMATION:

Immediate Receiving Waterbody:	Brazos River Tidal
Segment No:	1201
TSS:	10
Chloride:	3500
Effluent Flow for Aquatic Life (MGD)	6.57
Chronic Effluent % for Aquatic Life:	8
Acute Effluent % for Aquatic Life:	30
Oyster Waters:	No
Effluent Flow for Human Health (MGD):	5.23
Human Health Effluent %:	4

CALCULATE TOTAL/DISSOLVED RATIO:

Estuarine Metal	Intercept (b)	Slope (m)	Partition Coefficient (Kp)	Dissolved Fraction (Cd/Ct)		Water Effects Ratio (WER)	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Cadmium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Chromium (Total)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Chromium (+3)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	4.85	-0.72	13489.629	0.88		1	Assumed
Lead	6.06	-0.85	162181.010	0.38		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	5.86	-0.74	131825.674	0.43		1	Assumed
Zinc	5.36	-0.52	69183.097	0.59		1	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Acute Standard (ug/L)	Chronic Standard (ug/L)	WLAa	WLAc	LTAa	LTAc	Daily Avg. (ug/L)	Daily Max. (ug/L)
Aldrin	1.3	N/A	4.333	N/A	1.387	N/A	2.038	4.313
Aluminum[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic[d]	149	78	496.667	975.000	158.933	594.750	233.632	494.283
Cadmium[d]	45.62	10.02	152.067	125.250	48.661	76.403	71.532	151.337
Carbaryl	613	N/A	2043.333	N/A	653.867	N/A	961.184	2033.525
Chlordane	0.09	0.004	0.300	0.050	0.096	0.031	0.045	0.095
Chlorpyrifos	0.011	0.0056	0.037	0.070	0.012	0.043	0.017	0.036
Chromium (+3)[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (+6)[d]	1100	50	3666.667	625.000	1173.333	381.250	560.438	1185.688
Copper[d]	16.27	4.37	61.549	61.994	19.696	37.816	28.953	61.254
Copper[d] (oyster waters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide (free)	5.6	5.6	18.667	70.000	5.973	42.700	8.781	18.577
4,4'-DDT	0.13	0.0010	0.433	0.013	0.139	0.008	0.011	0.024
Dementon	N/A	0.1	N/A	1.250	N/A	0.763	1.121	2.371
Dicofol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.0019	2.367	0.024	0.757	0.014	0.021	0.045
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I (alpha)	0.034	0.0087	0.113	0.109	0.036	0.066	0.053	0.113
Endosulfan II (beta)	0.034	0.0087	0.113	0.109	0.036	0.066	0.053	0.113
Endosulfan sulfate	0.034	0.0087	0.113	0.109	0.036	0.066	0.053	0.113
Endrin	0.037	0.0023	0.123	0.029	0.039	0.018	0.026	0.055
Guthion	N/A	0.01	N/A	0.125	N/A	0.076	0.112	0.237
Heptachlor	0.053	0.0036	0.177	0.045	0.057	0.027	0.040	0.085
Hexachlorocyclohexane (Lindane)	0.16	N/A	0.533	N/A	0.171	N/A	0.251	0.531
Lead[d]	140	5.6	1223.511	183.527	391.524	111.951	164.568	348.169
Malathion	N/A	0.01	N/A	0.125	N/A	0.076	0.112	0.237
Mercury	2.1	1.1	7.000	13.750	2.240	8.388	3.293	6.966
Methoxychlor	N/A	0.03	N/A	0.375	N/A	0.229	0.336	0.711
Mirex	N/A	0.001	N/A	0.013	N/A	0.008	0.011	0.024
Nickel[d]	119	13.2	396.667	165.000	126.933	100.650	147.956	313.022
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.14	9.56	50.467	119.500	16.149	72.895	23.740	50.224
Phenanthrene	7.7	4.6	25.667	57.500	8.213	35.075	12.074	25.543
Polychlorinated Biphenyls (PCBs)	10	0.03	33.333	0.375	10.667	0.229	0.336	0.711
Selenium	564	136	1880.000	1700.000	601.600	1037.000	884.352	1870.976
Silver (free ion)	2.3	N/A	197.902	N/A	63.329	N/A	93.093	196.952
Toxaphene	0.21	0.0002	0.700	0.0025	0.224	0.0015	0.0022	0.0047
Tributlytin (TBT)	0.24	0.043	0.800	0.538	0.256	0.328	0.376	0.796
2,4,5 Trichlorophenol	259	12	863.333	150.000	276.267	91.500	134.505	284.565
Zinc[d]	98	89	552.665	1882.162	176.853	1148.119	259.974	550.012

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	SW Fish Only (ug/L)	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
Acrylonitrile	7.3	182.500	169.725	249.496	527.845
Aldrin	0.0028	0.070	0.065	0.096	0.202
Arsenic[d]	N/A	N/A	N/A	N/A	N/A
Barium[d]	N/A	N/A	N/A	N/A	N/A

Parameter	SW Fish Only (ug/L)	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
Benzene	70.8	1770.000	1646.100	2419.767	5119.371
Benzidine	0.00232	0.058	0.054	0.079	0.168
Benzo(a)anthracene	0.540	13.500	12.555	18.456	39.046
Benzo(a)pyrene	0.540	13.500	12.555	18.456	39.046
Bis(chloromethyl)ether	0.0129	0.323	0.300	0.441	0.933
Cadmium[d]	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	5.6	140.000	130.200	191.394	404.922
Chlordane	0.0213	0.533	0.495	0.728	1.540
Chlorobenzene	920	23000.000	21390.000	31443.300	66522.900
Chloroform	861	21525.000	20018.250	29426.828	62256.758
Chromium[d]	2216	55400.000	51522.000	75737.340	160233.420
Chrysene	5.4	135.000	125.550	184.559	390.461
Cresols	8744	218600.000	203298.000	298848.060	632256.780
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.007	0.175	0.163	0.239	0.506
4,4'-DDE	0.005	0.125	0.116	0.171	0.362
4,4'-DDT	0.005	0.125	0.116	0.171	0.362
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol	0.481	12.025	11.183	16.439	34.780
Dibromochloromethane	47.7	1192.500	1109.025	1630.267	3449.068
1,2-Dibromoethane	0.223	5.575	5.185	7.622	16.125
1,3-Dichloropropene (1,3-Dichloropropylene)	107	2675.000	2487.750	3656.993	7736.903
Dieldrin	0.001	0.025	0.023	0.034	0.072
p-Dichlorobenzene	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	49.3	1232.500	1146.225	1684.951	3564.760
1,1-Dichloroethylene	3.90	97.500	90.675	133.292	281.999
Dicofol	0.144	3.600	3.348	4.922	10.412
Dioxins/Furans (TCDD Equivalents)	9.33e-08	2.33e-06	2.17e-06	3.19e-06	6.75e-06
Endrin	0.893	22.325	20.762	30.521	64.571
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.00177	0.044	0.041	0.060	0.128
Heptachlor Epoxide	0.723	18.075	16.810	24.710	52.278
Hexachlorobenzene	0.0132	0.330	0.307	0.451	0.954
Hexachlorobutadiene	2.4	60.000	55.800	82.026	173.538
Hexachlorocyclohexane (alpha)	0.275	6.875	6.394	9.399	19.885
Hexachlorocyclohexane (beta)	0.964	24.100	22.413	32.947	69.704
Hexachlorocyclohexane (gamma) (Lindane)	1.34	33.500	31.155	45.798	96.892
Hexachloroethane	185	4625.000	4301.250	6322.838	13376.888
Hexachlorophene	0.036	0.900	0.837	1.230	2.603
Lead[d]	16.9	1107.715	1030.175	1514.357	3203.843
Mercury	0.0250	0.625	0.581	0.854	1.808
Methoxyclor	1.48	37.000	34.410	50.583	107.015
Methyl Ethyl Ketone	6.63e+06	1.66e+08	1.54e+08	2.27e+08	4.79e+08
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	156	3900.000	3627.000	5331.690	11279.970
N-Nitrosodiethylamine	5.12	128.000	119.040	174.989	370.214
N-Nitroso-di-*n*-Butylamine	8.98	224.500	208.785	306.914	649.321
PCB's (Polychlorinated Biphenyls)	8.85e-04	2.21e-02	2.06e-02	3.02e-02	6.40e-02
Pentachlorobenzene	4.45	111.250	103.463	152.090	321.768
Pentachlorophenol	90	2250.000	2092.500	3075.975	6507.675
Pyridine	8889	222225.000	206669.250	303803.798	642741.368
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.162	4.050	3.767	5.537	11.714

Parameter	SW Fish Only (ug/L)	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
Tetrachloroethylene	215	5375.000	4998.750	7348.163	15546.113
Toxaphene	0.009	0.225	0.209	0.308	0.651
2,4,5-TP (Silvex)	33.6	840.000	781.200	1148.364	2429.532
2,4,5-Trichlorophenol	712	17800.000	16554.000	24334.380	51482.940
Trichloroethylene	408	10200.000	9486.000	13944.420	29501.460
1,1,1-Trichloroethane	8391	209775.000	195090.750	286783.403	606732.233
TTHM (Sum of Total Trihalomethanes)	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	277	6925.000	6440.250	9467.168	20029.178

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	70%	85%
Aquatic Life		
Aldrin	1.427	1.733
Aluminum	N/A	N/A
Arsenic	163.542	198.587
Cadmium	50.073	60.802
Carbaryl	672.829	817.006
Chlordane	0.031	0.038
Chlorpyrifos	0.012	0.015
Chromium (+3)	N/A	N/A
Chromium (+6)	392.306	476.372
Copper	20.267	24.610
Copper[d] (oyster waters)	N/A	N/A
Cyanide (free)	6.147	7.464
4,4'-DDT	0.008	0.010
Dementon	0.785	0.953
Dicofol	N/A	N/A
Dieldrin	0.015	0.018
Diuron	N/A	N/A
Endosulfan (alpha)	0.037	0.045
Endosulfan (beta)	0.037	0.045
Endosulfan sulfate	0.037	0.045
Endrin	0.018	0.022
Guthion	0.078	0.095
Heptachlor	0.028	0.034
Hexachlorocyclohexane (Lindane)	0.176	0.213
Lead	115.198	139.883
Malathion	0.078	0.095
Mercury	2.305	2.799
Methoxychlor	0.235	0.286
Mirex	0.008	0.010
Nickel	103.569	125.762
Parathion (ethyl)	N/A	N/A
Pentachlrophenol	16.618	20.179
Phenanthrene	8.452	10.263
Polychlorinated Biphenyls (PCBs)	0.235	0.286
Selenium	619.046	751.699
Silver, (free ion)	65.165	79.129
Toxaphene	0.0016	0.0019
Tributlytin (TBT)	0.263	0.320
2,4,5 Trichlorophenol	94.154	114.329
Zinc	181.981	220.977

Parameter	70%	85%
Human Health		
Acrylonitrile	174.647	212.071
Aldrin	0.067	0.081
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	1693.837	2056.802
Benzidine	0.056	0.067
Benzo(a)anthracene	12.919	15.687
Benzo(a)pyrene	12.919	15.687
Bis(chloromethyl)ether	0.309	0.375
Cadmium	N/A	N/A
Carbon Tetrachloride	133.976	162.685
Chlordane	0.510	0.619
Chlorobenzene	22010.310	26726.805
Chloroform	20598.779	25012.803
Chromium	53016.138	64376.739
Chrysene	129.191	156.875
Cresols	209193.642	254020.851
Cyanide (free)	N/A	N/A
4,4'-DDD	0.167	0.203
4,4'-DDE	0.120	0.145
4,4'-DDT	0.120	0.145
2,4'-D	N/A	N/A
Danitol	11.508	13.973
Dibromochloromethane	1141.187	1385.727
1,2-Dibromoethane	5.335	6.478
1,3-Dichloropropene (1,3-Dichloropropylene)	2559.895	3108.444
Dieldrin	0.024	0.029
p-Dichlorobenzene	N/A	N/A
1,2-Dichloroethane	1179.466	1432.208
1,1-Dichloroethylene	93.305	113.298
Dicofol	3.445	4.183
Dioxins/Furans (TCDD Equivalents)	2.23e-06	2.71e-06
Endrin	21.364	25.942
Fluoride	N/A	N/A
Heptachlor	0.042	0.051
Heptachlor Epoxide	17.297	21.004
Hexachlrobenzene	0.316	0.383
Hexachlorobutadiene	57.418	69.722
Hexachlorocyclohexane (alpha)	6.579	7.989
Hexachlorocyclohexane (beta)	23.063	28.005
Hexachlorocyclohexane (gamma) (Lindane)	32.059	38.928
Hexachloroethane	4425.986	5374.412
Hexachlorophene	0.861	1.046
Lead	1060.050	1287.203
Mercury	0.598	0.726
Methoxyclor	35.408	42.995
Methyl Ethyl Ketone	1.59e+08	1.93e+08
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	3732.183	4531.937
N-Nitrosodiethylamine	122.492	148.740

Parameter	**70%**	**85%**
N-Nitroso-di-*n*-Butylamine	214.840	260.877
PCB's (Polychlorinated Biphenyls)	2.12e-02	2.57e-02
Pentachlorobenzene	106.463	129.276
Pentachlorophenol	2153.183	2614.579
Pyridine	212662.658	258233.228
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	3.876	4.706
Tetrachloroethylene	5143.714	6245.938
Toxaphene	0.215	0.261
2,4,5-TP (Silvex)	803.855	976.109
2,4,5-Trichlorophenol	17034.066	20684.223
Trichloroethylene	9761.094	11852.757
1,1,1-Trichloroethane	200748.382	243765.892
TTHM (Sum of Total Trihalomethanes)	N/A	N/A
Vinyl Chloride	6627.017	8047.092